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A model program on the preparation of elementary school teachers which was developed at Florida State University using a systems approach is characterized by specifications such as the utilization of performance criteria, individual progress rates, immediate application of theory to practice, and preparation extending into initial teaching years. The program was based on predictions about society in 1978 made by examining present trends toward urbanization, population explosion, and technology utilization. Inferences for elementary school education were made from these predictions and used as the basis of a task analysis of teaching for 1978. Five essential, interrelated teaching behaviors were derived from task analysis (the formulation of measurable behavioral objectives, selection and organization of a student-centered curriculum, use of appropriate teaching strategies, evaluation of learner outcomes in terms of behavioral changes, and acceptance of professional responsibility as a teacher), and a three-phase program (underclass, preservice, and inservice) was devised to develop these behaviors in teachers. In addition to the teacher education components of the model program, facilitating components such as admissions and screening procedures, a computerized management control system, and staff utilization and development patterns were devised. (ED 027 283 is the complete report.)(SM)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SUMMARY OF THE FINAL REPORT

Project No. 8-9021
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SUMMARY OF A MODEL FOR THE PREPARATION OF ELEMENTARY SCHOOL TEACHERS

THE FLORIDA STATE UNIVERSITY

October 1968

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U.S. DEPARTMENT OF
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SP003040

SUMMARY*

I. Introduction

The preparation of elementary school teachers undoubtedly is one of the most critical tasks for our society in the decade ahead. The elementary school teacher is coming to be perceived less as a kind-hearted craftsman and more as a skillful professional person. Indications are that this shift in perception is essential in light of the growing demands and expectations placed on the elementary school, and thus on the elementary school teacher. The challenge is to find ways to prepare elementary school teachers who will be adequate to the task of teaching as it is coming to be. This model program represents the efforts of an interdisciplinary team to design a preparation program for elementary teachers which will meet the expectations of society and the demands of the school in 1978. It provides specifications that should be helpful to the designer of new, forward-looking teacher education programs.

The model program described in this report is characterized by a number of unique features:

1. Utilization of performance criteria. A series of experiences designed to enable trainees to meet stated performance criteria will be developed to replace formal courses.

2. Individual progress rates. Trainees will be permitted to move from one experience to the next when they have demonstrated the ability to satisfactorily meet performance criteria.

3. Immediate application of theory to practice. Trainees will have an opportunity to try out new theoretical learnings about teaching immediately through extensive use of small to large scale teaching activities.

4. A repertoire of technical skills. Trainees will be taught the technical skills of teaching and will be helped to integrate these into a total teaching performance.

5. Preparation extended into initial teaching years. An in-service phase, implemented jointly by the preparing institution and selected school systems, is an integral part of the total model.

*Pages 1 through 14 (Chapter 1) of the final report.

6. Computerized management control system. A management control system utilizing a computer will be used to monitor individual trainees' progress and to make information available to staff and trainees as required.

7. Faculty development and utilization. The need for faculty retraining consistent with the demands of new roles in the model is recognized and provided for.

8. Selection of trainees for preparation. A direct effort is made to describe a selection system reflective of the performance criteria deemed necessary for teaching.

9. Acceptance of specialization. The desirability and necessity for specialization in elementary school teaching is accepted and planned for in the model.

Perhaps a comment concerning the idea of "specifications" would be appropriate here. Two meanings may be assigned to the word. On the one hand, it may be used to make a detailed description of requirements, dimensions, and materials necessary to fulfill a design. The builder uses the term in this sense in describing what materials will be used in fulfilling a blueprint.

On the other hand, the word "specifications" may be used to make the general more specific. This is an open-ended concept which provides for greater flexibility as the operation moves from the general to the more specific to the still more specific.

This idea is further illustrated by a painting in which the artist painted a mountain scene which shows a dim road leading into some low hills in the foreground. In the background he painted the mountains in such a way as to leave the impression that the dim road could lead in a zigzag fashion through a final pass over the mountain. The traveler, however, could not see all the way before he started. He could see the direction he was going and could get a clear view to the first turn. To make the trip over the mountain the traveler would need to know the general direction he wished to travel, to have faith that the dim trail would lead in that direction, and to believe that at each turn in the trail it would be possible to see more clearly to the next turn.

This model parallels the metaphor depicted by this painting. The model is described in rather specific terms, but for two major reasons the specifics are inexact in many parts. First, the lack of time has made it impossible to detail every operation. Second, and more important, as the staff prepared these specifications, it was clear that research evidence on which to base a model program was incomplete at this time, taking away from the exactness with which specifications could be developed. The model points the direction in which preparation programs for elementary teachers should move. Hopefully, the specifications included show the way past one or two turns.

II. Rationale

The rationale for this model program is based upon:

1. predictions of what society and education will be like by 1978;

2. inferences about the nature of teaching and the role of the elementary school teacher by 1978; and

3. implications for the preparation of elementary school teachers.

At best the prediction of things to come is risky. Assuming the absence of any catastrophe which would block the forward thrust of our national progress, however, certain specific predictions relative to the preparation of elementary school teachers can be made.

Predictions for Society by 1978

Our predictions for society by 1978 are:

1. The trend toward urbanization will be accelerated.

2. Traditional wisdom and values will be increasingly challenged and the voices of protest will demand public response.

3. The identity of the individual will merge increasingly with that of one or more groups.

4. The factors which tend to alienate young people as a group will continue to operate.

5. Political issues will increase in complexity so that sounder judgment and greater integrity will be required of both citizens and leaders.

6. A massive effort will be made by the Federal Government to alleviate social ills.

7. The influence and pervasiveness of multiple mass media will keep a broad range of issues before the public.

8. Science and technology will continue to be dominant forces in our lives, creating problems and offering solutions to problems over a wide front.

9. The international character of life will influence social, political and economic affairs in a striking way.

Predictions for Education by 1978

Our predictions for education by 1978 are:

1. Society will make increased demands upon schools and colleges to fashion programs to meet the needs of all of its people.

2. The fact that education will be increasingly society-oriented will aggravate the tension between educators and the general public.

3. Education will meet society's demands through increasing attention to the individual.

4. Each major level of organized education will see itself as capable of managing its own program planning, and teachers at each level will seek autonomy over a greater range of matters important to them than ever before.

5. Curriculum developers in elementary and secondary schools will try to overcome extreme separate-subject-centeredness and move toward a more interdisciplinary design.

6. Schools, especially in the inner city, will have to relate more directly to the total environment.

7. Emphasis will be placed on relevance in learning.

Inferences about Elementary School Teaching by 1978

Our inferences about elementary school teaching by 1978 are:

1. Only broadly educated persons of high ability will be able to make the difficult decisions required of elementary school teachers.

2. The emerging role of the elementary school teacher will require depth of study in at least one academic area and competence in employing a wide range of teaching strategies.

3. The elementary school teacher will have to be able to work as an effective team member with other professional and para-professional personnel.

4. Initial training requirements will call for a pre-service--in-service continuum of experiences.

5. The elementary school teacher will need to view the elementary school as an institution in almost continuous transition and come to expect and cope with educational change accordingly.

Task Analysis of Teaching

The decision to use a systems approach in determining the specifications for this model training program required a more careful and detailed analysis of the component behaviors in teaching than these predictions and inferences provided. Therefore, a task analysis of teaching as forecast for 1978 was undertaken. Four essential teacher behaviors resulted from this:

1. The teacher will plan for instruction by formulating objectives in terms of behavior which is observable and measurable.

2. The teacher will select and organize content to be learned in a manner consistent with both the logic of the content itself and the psychological demands of the learner.

3. The teacher will employ appropriate strategies for the attainment of desired behavioral objectives.

4. The teacher will evaluate instructional outcomes in terms of behavioral changes.

These behaviors are clearly interdependent. As shown in Figure 1, they are directly concerned with instructional-curricular functions. Still, only the behaviors which have to do with employing teaching strategies specify interaction with the learner. Students can be active in the formulation of objectives, in content selection, and in planning some and undergoing nearly all kinds of evaluative activities, but the teacher behaviors required for competency in dealing with objectives, content, and evaluation are primarily analytical skills rather than interactive ones. The component behaviors in strategy tasks involve interacting with pupils as they deal with content and material which will produce and reinforce appropriate learning behavior.

The tasks analysis engaged in did yield a fifth category of teacher behavior, but of a somewhat different order than the four already mentioned. This fifth dimension of teacher behavior is stated as follows:

> 5. The teacher will demonstrate the competence and willingness to accept professional responsibilties and to serve as a professional leader.

This behavior, too, is attended to in the model program. It is felt that this dimension of teaching behavior will be of the utmost importance by 1978. Ways of achieving it are therefore specified in this report.

Figure 2 shows a graphic presentation of the way in which the model program staff moved from predictions about society and education in 1978, to inferences about the nature of teaching and the role of the elementary teacher in 1978, to implications for his preparation, and to the specifications presented in this model program.

III. The Curriculum

A three phased program, consisting of an underclass phase, a pre-service phase, and an in-service phase, was designed to develop the behaviors outlined above. (See Figure 3.)

Underclass Phase

The underclass phase of the program, which represents what would normally be the first two years of college, concentrates mainly on general education.[1] The stand has been taken that the elementary teacher

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[1] General Education: studies in history, the humanities, the natural sciences, and the social sciences.

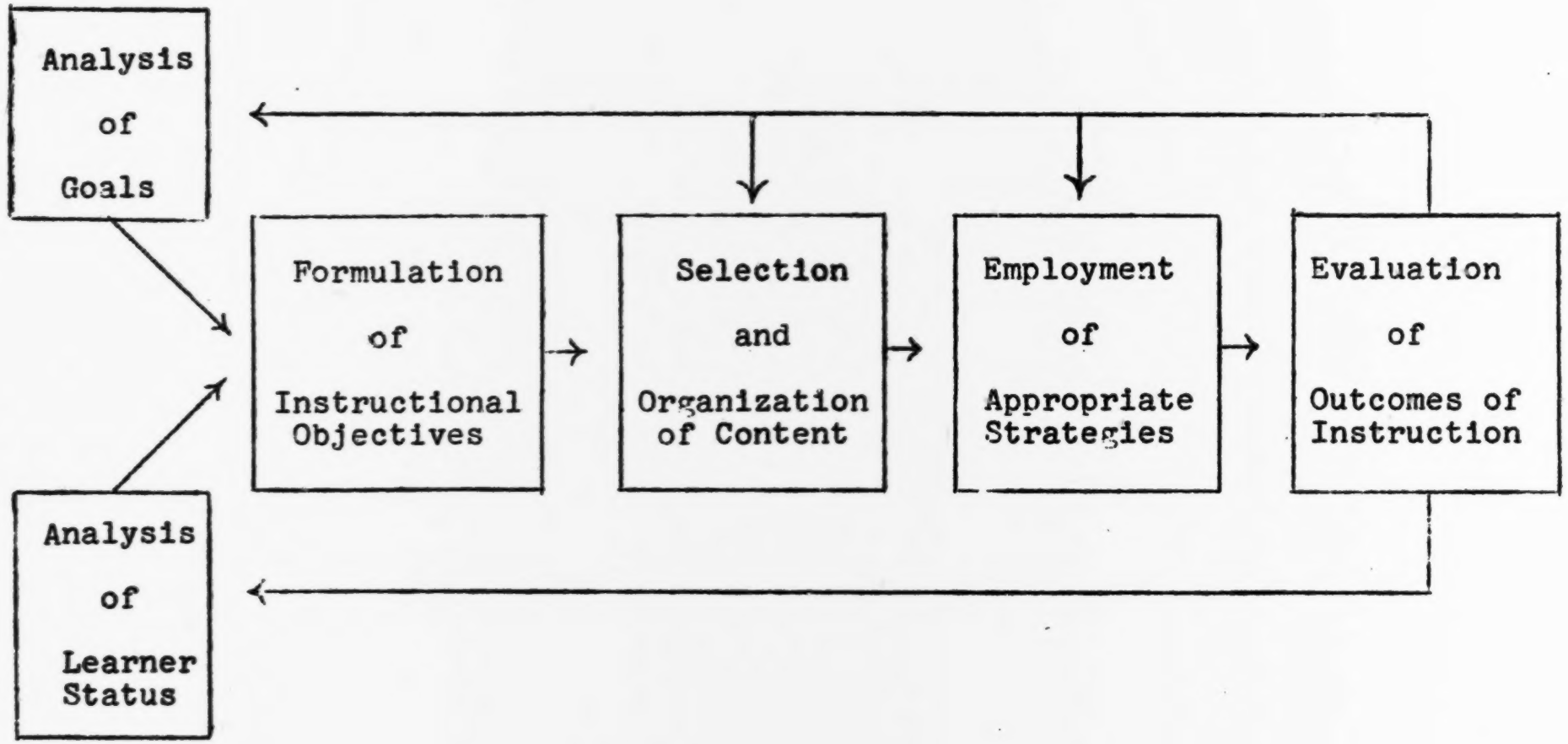
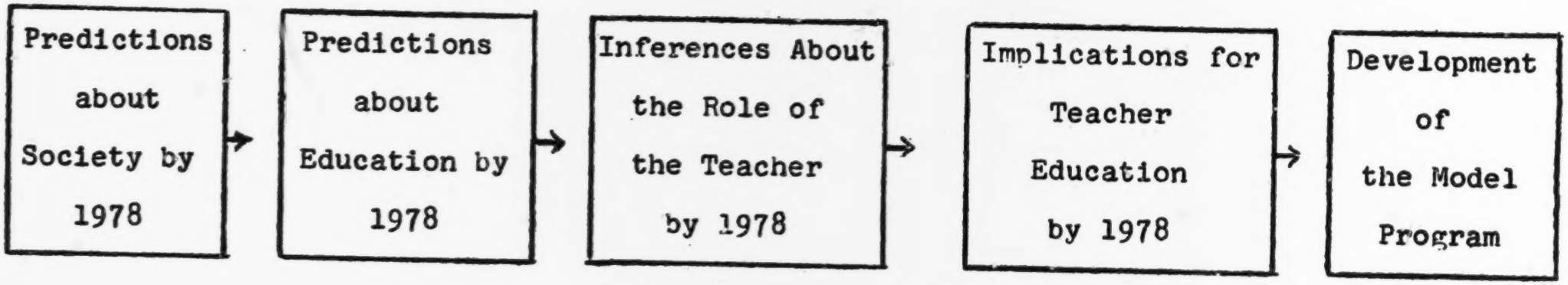

Analysis of Goals
Formulation of Instructional Objectives
Selection and Organization of Content
Employment of Appropriate Strategies
Evaluation of Outcomes of Instruction
Analysis of Learner Status

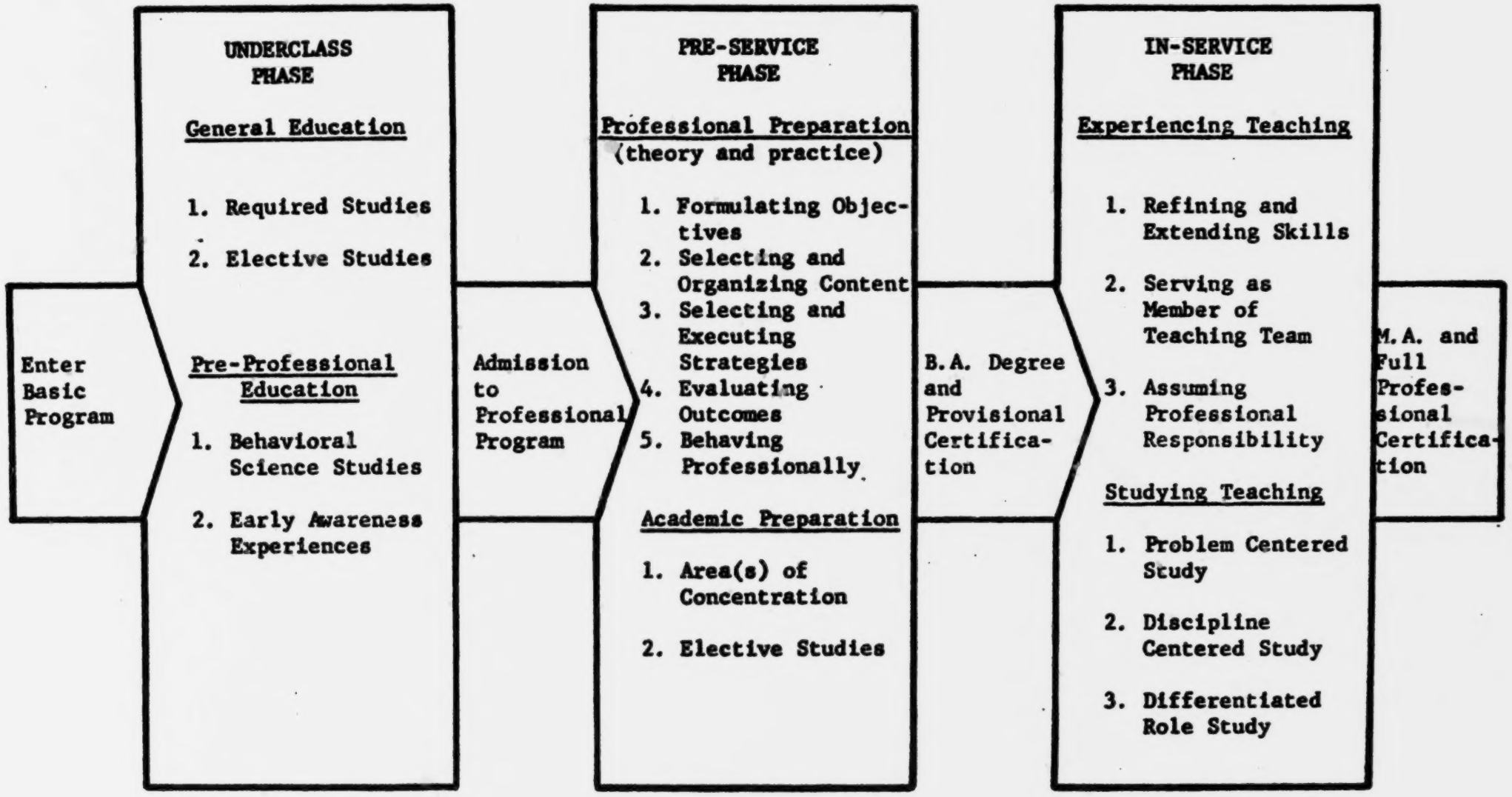
DIAGRAM OF THE TEACHING TASKS

Figure 1


Predictions about Society by 1978
Predictions about Education by 1978
Inferences About the Role of the Teacher by 1978
Implications for Teacher Education by 1978
Development of the Model Program

GRAPHIC PRESENTATION OF MODEL PROGRAM DEVELOPMENT

Figure 2



A THREE PHASE PLAN FOR PREPARING ELEMENTARY TEACHERS

Figure 3

by 1978 must be a broadly educated person. The underclass phase of the program is perceived as making a major contribution to that requirement for the trainees.[2] The underclass phase of the model will also incorporate pre-professional studies to include work in the behavioral science, and an early awareness-involvement program designed to inform prospective teacher candidates about the role, demands, and rewards of teaching, and to provide them with a basis for making a commitment to the preparation program and to service in the profession.

Pre-Service Phase

The pre-service phase of the program beings after admission to the program, usually the beginning of the junior year, and continues through the completion of the bachelor's degree and the granting of provisional certification. The amount of time actually spent in the pre-service phase will vary from individual to individual. Emphasis during this phase will be on professional preparation; i.e., undergoing experiences designed specifically to prepare the trainees to fulfill the professional duties of teachers. Candidates will also engage in study to develop an area of academic concentration[3] and to pursue elective interests.

Built on the five teaching behaviors identified earlier, success in the pre-service phase is dependent upon the ability of the trainee to state objectives, select and organize content, utilize appropriate strategies, utilize evaluation skills and techniques, and demonstrate a willingness to provide leadership and professional responsibilities consistent with stated performance criteria.

In-Service Phase

The in-service phase of the program will begin with the awarding of the bachelor's degree and extend through two school years and three summers, culminating in the master's degree and full professional certification. During the academic years, the trainees will be employed as teachers, with some time set aside for the study of problems encountered in the teaching environment. Three summers will be spent on campus. The goals to be achieved in these summer sessions are: to extend systematically the trainees' competence in areas such as the psychological, sociological, and philosophical foundations of education; to help them to become more aware of and competent with the several dimensions of professional leadership responsibilities; and to enable

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[2] Trainee: teacher candidate; college student enrolled in the pre-service or in-service phases of the program.

[3] Area of Concentration: academic area, as art, mathematics, natural science, social science.

them to pursue an appropriate area of specialization from the point of view of role differentiation. A part of each summer, and especially the first one, will be devoted to preparation for the upcoming teaching assignment in the schools.

It is planned that the university will assume a major role along with the public school system for planning and executing the in-service phase of the program during the two academic years the trainees are teaching. The university will not attempt to dictate the nature of the program, but will rather enter into a cooperative arrangement with the local school system for planning a program appropriate to the needs of the local school system which at the same time will be consistent with the goals of the model program. The university will commit itself to provide an appropriate share of human and financial resources for this part of the in-service phase.

Specialization

There is a specialization dimension in the model program, too. Overall, the program is designed to prepare teachers to work with pupils who range in age from three through about thirteen. There will also be opportunities for some work in all of the subject matter areas normally encompassed in the elementary school curriculum. Thus, all teacher candidates[5] will be helped to develop a common general background relative to content areas and understanding of elementary school age pupils. However, to provide the level of competency which will be needed by the teacher in 1978, three kinds of specialization will be provided for in the program. Each teacher candidate is expected to make a decision about these specializations.

First, trainees will select the age group with which they want especially to work. Since the emphasis in the program will be on the continuity of programs covering the complete range of ages, there will not be rigid, artificial divisions of the age groups. Two broadly defined age groups will be used: Pupils ages three to eight or nine (or early childhood), and pupils ages eight or nine to about thirteen (or later childhood). The choice made will be reflected in the nature of the training experiences provided for the candidate.

The second area of choice for specialization will center on an academic subject. All trainees will have a reasonable knowledge of each of the subject matter areas included in the elementary curriculum, but they will be expected to select at least one area for special study. It is expected that this area will be an extension of study begun in the underclass phase.

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[5] Teacher candidate: trainee; college student enrolled in the pre-service or in-service phase of the program.

The third area of specialization will be concerned with differentiated teaching functions. The equivalent of one summer during the in-service phase will be devoted to role differentiation. Care will be taken to ensure that each trainee has a clear understanding of such current and emerging roles in education, as programmer, media specialists, and content area resource teacher.

This program will have enough flexibility to permit other specialist variations. For instance, a trainee could make a specialty of becoming a master teacher in an inner-city school, or a master teacher with exceptionally able children, and the like.

IV. Facilitating Components

Admissions and Screening

The admission and screening procedures of the model program were designed to select for the program those candidates who show evidence of capability to meet performance criteria as stated and who demonstrate a commitment to complete the program and to remain in teaching. Research evidence relative to predicting teacher effectiveness, success, and perseverance rate to date has been inconclusive. Therefore, it is seen as necessary in this model program to establish a data bank on which to base studies to improve predictions in the future.

Immediately, upon being admitted to the program, the teacher candidates will be assessed against certain pre-determined entry skills and knowledges in each of the areas included in the elementary school curriculum. Provision will be made to enable trainees with deficiencies to engage in study to overcome them while beginning the pre-service phase. Screening from the program will be done on the basis of inability to meet stated performance criteria. Every effort will be made to provide feedback to trainees on the quality of their performance on a regular basis so that they may judge for themselves the nature of the progress they are making.

Computerized Management Control System

A computerized management control system has been developed for the program to serve three major purposes. First, each individual trainee's progress will be monitored and data relative to progress and to the probability of completing the program successfully will be made available to the trainee and his counseling professor as needed. Second, summary data on the progress of all trainees will be made available to the project managers on a regular basis. This information will include projections of the points to which trainees will have progressed in the near future in order that the project managers can anticipate necessary personnel, space, and material resources. The third major use will be to provide data for researchers interested in a variety of variables having to do with success in training and success in actual teaching.

A two-system concept will characterize the CMCS program. A real-time management system will be developed utilizing a very large PERT network which will provide information to the trainee and his counseling professor. A Batch-mode retrieval system will provide the trainee's background information and detailed trainee performance information for the program managers and researchers.

The program will adapt an existing Batch-mode PERT program to time sharing, real-time interrogation. The hardware needed includes a central processing unit, a transmitting control device, a peripheral processor, and remote terminals, as well as the usual printers, card punch, and similar equipment.

Staffing

A major characteristic of the model program is its design for staffing. Many of the roles required in this program are new to professional teacher education. Therefore, the retraining of faculty becomes a major problem. In addition to the problem of staff development, the program directs itself to new staff requirements, staff organization, and staff utilization arrangements.

A variety of new roles will emerge within a college of education as traditional courses are abandoned and experiences oriented to performance criteria replace them. Three major types of assignments have been identified for faculty in the professional component: administration-student personnel; teaching-counseling; and selecting and producing materials.

It is expected that most faculty members will, during the course of an academic year, work in two types of assignments. Typically, a faculty member will serve as a teacher-counselor and, either an administrator-student personnel worker or a selector-producer of materials. The team concept will be utilized for much of the operation by grouping faculty members from various backgrounds and with unique strengths to take responsibility for certain areas of the training program.

The proper organization of the staff will require the support of the university administration. It is likely that at least some of the faculty will be on joint appointment either between some departments of a college of arts and sciences and the teacher education program, or between some department within a college of education and the program.